

onal application No. PCT/JP03/08574

A. CLASSIFICATION OF SUBJECT MATTER Int.Cl ⁷ H05B33/04					
According to International Patent Classification (IPC) or to both national classification and IPC					
Minimum o	B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols)				
Int.	C1 ⁷ H05B33/04	•			
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Decuments	Decomposite the complex of the state of the				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Jitsuyo Shinan Koho 1922–1996 Jitsuyo Shinan Toroku Koho 1996–2003					
	i Jitsuyo Shinan Koho 1971-2003	Toroku Jitsuyo Shinan Koh			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)					
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C. DOCU	C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category*	Citation of document, with indication, where a	opropriate, of the relevant passages	Relevant to claim No.		
Y	JP 5-290976 A (Denki Kagaku K		1-6,8-16		
i	05 November, 1993 (05.11.93)				
ĺ	Claims; page 2, right column left column, line 25	, line 41 to page 3,			
	(Family: none)				
Y	JP 2000-268954 A (Matsushita	Electric Industrial	1-6,8-16		
	Co., Ltd.),		•		
	29 September, 2000 (29.09.00) Claim 1; page 5, left column				
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Y	JP 10-275682 A (NEC Corp.),	}	1-9,11-16		
_	13 October, 1998 (13.10.98),		1 3,11 10		
	Claims; page 3, right column,	, lines 17 to 47;			
	Fig. 2 & US 5990615 A & KR	98071030 A			
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X Further documents are listed in the continuation of Box C. See patent family annex.					
* Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but cited to					
considered to be of particular relevance understand the principle or theory underlying the invention amount of particular relevance; the claimed invention cannot document of particular relevance; the claimed invention cannot			erlying the invention		
date considered novel or cannot be considered to involve an inventiv			ed to involve an inventive		
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) step when the document is taken alone document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is			laimed invention cannot be		
	ent referring to an oral disclosure, use, exhibition or other	combined with one or more other such	documents, such		
"P" docum	ent published prior to the international filing date but later e priority date claimed	"&" combination being obvious to a person document member of the same patent f			
Date of the	Date of the actual completion of the international search Date of mailing of the international search report				
29 J	uly, 2003 (29.07.03)	19 August, 2003 (19	.08.03)		
Name and mailing addrags of the ISA/					
Name and mailing address of the ISA/ Japanese Patent Office		Authorized officer			
Facsimile No.		Telephone No.			

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 7-169567 A (Idemitsu Kosan Co., Ltd.), 04 July, 1995 (04.07.95), Page 11, left column, lines 7 to 19; page 12, left column, line 32 to right column, line 31 (Family: none)	
Y	JP 2002-43055 A (Tohoku Pioneer Corp., Dynic Corp.), 08 February, 2002 (08.02.02), Full text & US 2002/50785 A & KR 2001105201 A	1-16
A	JP 5-114486 A (Ricoh Co., Ltd.), 07 May, 1993 (07.05.93), (Family: none)	1-16
A	JP 61-96695 A (Matsushita Electric Industrial Co., Ltd.), 15 May, 1986 (15.05.86), (Family: none)	1-16